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aerospace metal alloys

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metals, ceramics, polymers

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## AA 3003

**Category** Aluminum Alloy

**Class** Wrought

## Composition

Element	Weight %
Al	98.6
Cu	0.12
Mn	1.2

## Mechanical Properties

Properties		Conditions	
		T (°C)	Treatment
Density ( $\times 1000 \text{ kg/m}^3$ )	2.73	25	
Poisson's Ratio	0.33	25	
Elastic Modulus (GPa)	70-80	25	
Tensile Strength (Mpa)	130		
Yield Strength (Mpa)	125	25	H12 <a href="#">more</a>
Elongation (%)	10		
Reduction in Area (%)			
Hardness (HB500)	35	25	H12 <a href="#">more</a>
Shear Strength (MPa)	83	25	H12 <a href="#">more</a>
Fatigue Strength (MPa)	55	25	H12 <a href="#">more</a>

## Thermal Properties

<b>Thermal Expansion</b> ( $10^{-6}/^{\circ}\text{C}$ )	23.2	20-100	
<b>Thermal Conductivity</b> (W/m-K)	162	25	H12 <a href="#">more</a>

### Electric Properties

Properties	Conditions		
	T ( $^{\circ}\text{C}$ )	Treatment	
<b>Electric Resistivity</b> ( $10^{-9}\text{W-m}$ )	41	25	H12 <a href="#">more</a>

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